Chapter 7

Heavy Vehicles and Characteristics

Summary Statistics

Table		
7.1	Heavy single-unit trucks, 1996	
	Registration (thousands)	*5,265*
	Vehicle miles (millions)	*63,967*
	Fuel economy (miles per gallon)	*6.8*
7.1	Combination trucks, 1996	
	Registration (thousands)	*1,742*
	Vehicle miles (millions)	*118,789*
	Fuel economy (miles per gallon)	*5.9*
7.3	Trucks by size, 1992 Truck Inventory & Use Survey	
	Light (0–10,000 lbs)	*93.3%*
	Medium (10,001–26,000 lbs)	*3.4%*
	Heavy (26,001 lbs and over)	*3.5%*
7.11	Freight Shipments,1993 Commodity Flow Survey	
	Value (million dollars)	*6,123,832*
	Tons (thousands)	*12,157,105*
	Ton-miles (millions)	*3,627,919*
7.13	Bus passenger miles, 1996	(millions)
	Transit	*18,860*
	Intercity	*28,300*
	School	*99,000*

Table 7.1
Summary Statistics for Other Single-Unit and Combination Trucks, 1970–96[a]

	Other single-unit trucks[b]				Combination trucks[c]			
Year	Registrations (thousands)	Vehicle travel (million miles)	Fuel use (million gallons)	Fuel economy (miles per gallon)	Registrations (thousands)	Vehicle travel (million miles)	Fuel use (million gallons)	Fuel economy (miles per gallon)
1970	3,681	27,081	3,968	6.8	905	35,134	7,348	4.8
1971	3,770	28,985	4,217	6.9	919	37,217	7,595	4.9
1972	3,918	31,414	4,844	6.5	961	40,706	8,120	5.0
1973	4,131	33,661	5,294	6.4	1,029	45,649	9,026	5.1
1974	4,211	33,441	5,261	6.4	1,085	45,966	9,080	5.1
1975	4,232	34,606	5,420	6.4	1,131	46,724	9,177	5.1
1976	4,350	36,390	5,706	6.4	1,225	49,680	9,703	5.1
1977	4,450	39,339	6,268	6.3	1,240	55,682	10,814	5.1
1978	4,518	42,747	6,955	6.1	1,342	62,992	12,165	5.2
1979	4,505	42,012	7,050	6.0	1,386	66,992	12,864	5.2
1980	4,374	39,813	6,923	5.8	1,417	68,678	13,037	5.3
1981	4,455	39,568	6,867	5.8	1,261	69,134	13,509	5.1
1982	4,325	40,658	6,803	6.0	1,265	70,765	13,583	5.2
1983	4,204	42,546	6,965	6.1	1,304	73,586	13,796	5.3
1984	4,061	44,419	7,240	6.1	1,340	77,377	14,188	5.5
1985	4,593	45,441	7,399	6.1	1,403	78,063	14,005	5.6
1986	4,313	45,637	7,386	6.2	1,408	81,038	14,475	5.6
1987	4,188	48,022	7,523	6.4	1,530	85,495	14,990	5.7
1988	4,470	49,434	7,701	6.4	1,667	88,551	15,224	5.8
1989	4,519	50,870	7,779	6.5	1,707	91,879	15,733	5.8
1990	4,487	51,901	8,357	6.2	1,709	94,341	16,133	5.8
1991	4,481	52,898	8,172	6.5	1,691	96,645	16,809	5.7
1992	4,370	53,874	8,237	6.5	1,675	99,510	17,216	5.8
1993	4,408	56,772	8,488	6.7	1,680	103,116	17,748	5.8
1994	4,906	61,284	9,032	6.8	1,681	108,932	18,653	5.8
1995	5,024	62,705	9,216	6.8	1,696	115,451	19,777	5.8
1996	5,265	63,967	9,365	6.8	1,742	118,789	20,098	5.9
				Average annual percentage change				
1970–96	1.4%	3.4%	3.4%	0.0%	2.6%	4.8%	3.9%	0.8%
1986–96	2.0%	3.4%	2.4%	0.9%	2.2%	3.9%	3.3%	0.5%

Source:
U. S. Department of Transportation, Federal Highway Administration, *Highway Statistics 1996*, Washington, DC, 1997, Table VM1, p. V-94 and annual.
(Additional resources: http://www.fhwa.dot.gov)

[a] The Federal Highway Administration changed the combination truck travel methodology in 1993.
[b] Other single-unit trucks are defined as all single-unit trucks with more than two axles or more than four tires.
[c] The fuel economy for combination trucks is not the same as the fuel economy for Class 8 trucks. Fuel economy for Class 8 trucks is shown in Table 3.24.

Table 7.2
New Retail Truck Sales by Gross Vehicle Weight, 1970–96[a]
(thousands)

Calendar year	Class 1 6,000 lbs. or less	Class 2 6,001– 10,000 lbs.	Class 3 10,001– 14,000 lbs.	Class 4 14,001– 16,000 lbs.	Class 5 16,001– 19,500 lbs.	Class 6 19,501– 26000 lbs.	Class 7 26,001– 33,000 lbs.	Class 8 33,001 lbs. and over	Total
Domestic sales (import data are not available)									
1970[b]	1,049	408	6	12	58	133	36	89	1,791
1971	1,185	488	6	15	46	140	34	99	2,013
1972	1,498	599	55	11	29	182	35	126	2,535
1973	1,754	758	50	3	16	236	37	155	3,009
1974	1,467	696	21	3	14	207	31	148	2,587
1975	1,101	952	23	1	9	159	23	83	2,351
1976	1,318	1,401	43	[c]	9	153	22	97	3,043
1977	1,306	1,803	36	3	5	163	28	141	3,485
1978	1,334	2,140	73	6	3	156	41	162	3,915
1979	1,271	1,574	15	3	3	146	50	174	3,236
1980	985	975	4	[c]	2	90	58	117	2,231
1981	896	850	1	[c]	2	72	51	100	1,972
1982	1,102	961	1	[c]	1	44	62	76	2,248
1983	1,314	1,207	[c]	[c]	1	47	59	82	2,710
1984	2,031	1,224	6	[c]	5	55	78	138	3,538
1985	2,408	1,280	11	[c]	5	48	97	134	3,983
Domestic and import sales									
1986	3,380	1,214	12	[c]	6	45	101	113	4,870
1987	3,435	1,175	14	2	8	44	103	131	4,912
1988	3,467	1,333	14	21	8	54	103	148	5,149
1989	3,313	1,297	19	27	7	39	93	145	4,942
1990	3,451	1,097	21	27	5	38	85	121	4,846
1991	3,246	876	21	24	3	22	73	99	4,365
1992	3,608	1,021	26	26	4	28	73	119	4,903
1993	4,119	1,232	27	33	4	27	81	158	5,681
1994	4,527	1,506	35	44	4	20	98	186	6,421
1995	4,422	1,631	40	53	4	23	106	201	6,481
1996	4,829	1,690	52	59	7	19	104	170	6,930
Average annual percentage change									
1970–85	5.7%	7.9%	4.1%	-	-15.1%	-6.6%	6.8%	2.8%	5.5%
1986–96	3.6%	3.4%	15.8%	-	1.6%	-8.3%	0.3%	4.2%	3.6%

Source:
American Automobile Manufacturers Association, *Motor Vehicle Facts and Figures 1997*, Detroit, MI, 1997, p. 20, and annual.
(Additional resources: http://www.aama.com)

[a] Sales include domestic-sponsored imports.
[b] Data for 1970 is based on new truck registrations.
[c] Less than 500 trucks.

Truck Inventory and Use Survey

The Truck Inventory and Use Survey (TIUS) provides data on the physical and operational characteristics of the Nation's truck population. It is based on a probability sample of private and commercial trucks registered (or licensed) in each state. Data for 1992 have been released in a report, as well as on CD-ROM. Copies may be obtained by contacting the U.S. Bureau of the Census, Transportation Characteristics Surveys Branch (301)457-2797. Internet site http://www.census.gov/svsd/www/tiusview.html is the location of the TIUS on-line.

The 1987 and 1992 surveys, in addition to trucks, included minivans, vans, station wagons on truck chassis, and jeep-like vehicles. The 1977 and 1982 surveys did not include those vehicle types. The estimated number of trucks that were within the scope of the 1992 TIUS and registered in the U.S. as of July 1, 1992, was 59.2 million. These trucks were estimated to have been driven a total of 786.3 billion miles during 1992, an increase of 33.7% from 1987. The average annual miles traveled per truck was estimated at 11,900 miles.

In the 1992 TIUS, there are several ways to classify a truck by weight. The survey respondent was asked the average weight of the vehicle or vehicle-trailer combination when carrying a typical payload; the empty weight (truck minus cargo) of the vehicle as it was usually operated; and the maximum gross weight at which the vehicle or vehicle-trailer combination was operated. The Census Bureau also collected information on the Gross Vehicle Weight Class of the vehicles (decoded from the vehicle identification number) and the registered weight of the vehicles from the State registration files. Some of these weights are only provided in categories, while others are exact weights. Since all these weights could be quite different for a single truck, the tabulations by weight can be quite confusing. For illustration of this, see Tables 3.25 and 3.26. The first set of data are based on the average weight as reported by the respondent; the data on Table 3.26 are based on the Gross Vehicle Weight Class of the vehicle when it was manufactured. There is a 22.8% difference in the number of Class 1 trucks. In most tables, the Gross Vehicle Weight Class was used. However, on the tables comparing different survey estimates, average weight must be used, as the older surveys did not include data on the Gross Vehicle Weight rating.

These tables illustrate the difference between two weight variables in the Truck Inventory and Use Survey. The manufacturer's gross vehicle weight class is likely to be a more accurate representation.

Table 7.3
Truck Statistics by Gross Vehicle Weight Class, 1992

Manufacturer's gross vehicle weight class	Number of trucks	Percentage of trucks	Average annual miles per truck	Average fuel economy	Gallons of fuel used (millions)	Percentage of fuel use
6,000 lbs and less	37,068,163	62.61%	12,739	17.23	27,397	44.76%
6,001 – 10,000 lbs	17,519,216	29.59%	11,610	13.00	15,646	25.56%
10,001 – 14,000 lbs	349,301	5.90%	15,814	9.48	583	0.95%
14,001 – 16,000 lbs	127,219	0.21%	14,420	9.19	200	0.33%
16,001 – 19,500 lbs	209,158	0.35%	4,876	8.21	124	0.20%
19,501 – 26,000 lbs	1,859,529	3.14%	11,746	7.26	3,008	4.91%
26,001 – 33,000 lbs	197,985	0.33%	30,074	6.64	897	1.46%
33,001 lbs and up	1,870,183	3.16%	39,832	5.58	13,353	21.82%
Total	**59,200,755**	**100.00%**	**13,281**	**12.85**	**61,206**	**100.00%**

Source:
U.S. Department of Commerce, Bureau of the Census, *1992 Truck Inventory and Use Survey*, Microdata File on CD, 1995. (Additional resources: http://www.census.gov/svsd/www.tiusview.html)

Table 7.4
Percentage of Trucks by Size Class, 1977, 1982, 1987, and 1992
(percentage)

Size class	Average weight as reported by respondent	1977 TIUS	1982 TIUS	1987 TIUS	1992 TIUS
Class 1	6,000 lbs and less	66.0%	77.8%	85.4%	85.4%
Class 2	6,001–10,000 lbs	17.9%	11.6%	6.5%	7.9%
Class 3	10,000–14,000 lbs	3.1%	1.6%	1.2%	1.2%
Class 4	14,001–16,000 lbs	1.3%	0.9%	0.5%	0.5%
Class 5	16,001–19,500 lbs	2.1%	1.0%	0.6%	0.5%
Class 6	19,501–26,000 lbs	3.4%	2.4%	1.7%	1.2%
Class 7	26,001–33,000 lbs	1.5%	1.0%	0.8%	0.7%
Class 8	33,001 lbs and over	4.6%	3.8%	3.3%	2.8%

Source:
Estimates are based on data provided on the following public use tapes: U.S. Department of Commerce, Bureau of the Census, 1977 Census of Transportation, *Truck Inventory and Use Survey*, Washington, DC, 1980; U.S. Department of Commerce, Bureau of the Census, 1982 Census of Transportation, *Truck Inventory and Use Survey*, Washington, DC, 1985; U.S. Department of Commerce, Bureau of the Census, 1987 Census of Transportation, *Truck Inventory and Use Survey*, Washington, DC, 1990; and U.S. Department of Commerce, Bureau of the Census, 1992 Census of Transportation, *Truck Inventory and Use Survey*, Washington, DC, 1995.
(Additional resources: http://www.census.gov/svsd/www/tiusview.html)

Table 7.5
Truck Fuel Economy by Size Class, 1977, 1982, 1987, and 1992
(miles per gallon)

Size class	Average weight as reported by respondent	1977 TIUS	1982 TIUS	1987 TIUS	1992 TIUS
Class 1	6,000 lbs and less	13.2	14.2	15.0	16.1
Class 2	6,001–10,000 lbs	11.5	11.1	10.9	12.2
Class 3	10,000–14,000 lbs	9.4	8.1	8.1	9.2
Class 4	14,001–16,000 lbs	6.9	7.5	7.5	8.5
Class 5	16,001–19,500 lbs	7.6	7.2	7.1	8.1
Class 6	19,501–26,000 lbs	6.1	6.9	6.4	7.2
Class 7	26,001–33,000 lbs	5.3	6.2	6.1	6.8
Class 8	33,001 lbs and over	4.8	5.2	5.3	5.5

Source:
Estimates are based on data provided on the following public use tapes: U.S. Department of Commerce, Bureau of the Census, 1977 Census of Transportation, *Truck Inventory and Use Survey*, Washington, DC, 1980; U.S. Department of Commerce, Bureau of the Census, 1982 Census of Transportation, *Truck Inventory and Use Survey*, Washington, DC, 1985; U.S. Department of Commerce, Bureau of the Census, 1987 Census of Transportation, *Truck Inventory and Use Survey*, Washington, DC, 1990; and U.S. Department of Commerce, Bureau of the Census, 1992 Census of Transportation, *Truck Inventory and Use Survey*, Washington, DC, 1995. (Additional resources: http://www.census.gov/svsd/www/tiusview.html)

Table 7.6
Percentage of Trucks by Fleet Size and Primary Refueling Facility, 1992

	Primary refueling facility				
Truck fleet size	Central company-owned fueling facility	Single contract fueling facility located off-site	Public fueling stations	Other	Total
1	7.91%	2.52%	84.55%	5.02%	100%
2–5	16.41%	4.44%	72.51%	6.64%	100%
6–9	31.40%	7.73%	55.53%	5.33%	100%
10–24	43.90%	9.44%	43.70%	2.96%	100%
25–99	56.98%	7.39%	33.50%	2.13%	100%
100–499	58.34%	7.50%	31.18%	2.98%	100%
500–999	57.93%	7.26%	30.89%	3.92%	100%
1,000–4,999	60.71%	3.28%	32.65%	3.36%	100%
5,000–9,999	58.90%	5.05%	29.09%	6.96%	100%
10,000 & up	59.96%	4.68%	25.69%	9.66%	100%
Total	**33.26%**	**5.76%**	**56.15%**	**4.83%**	**100%**

Source:
U.S. Department of Commerce, Bureau of the Census, *1992 Truck Inventory and Use Survey*, Microdata File on CD, 1995. (Additional resources: http://www.census.gov/svsd/www/tiusview.html)

Though diesel engines are generally more efficient than gasoline engines, variations in patterns of use and weight distributions within a weight category can cause the fuel economies to be more similar. Data in the ***Total*** *row give a good indication that the gasoline trucks are mainly lighter vehicles and diesels are used in heavier applications.*

Table 7.7
Truck Fuel Economy by Fuel Type and Size Class, 1992
(miles per gallon)

Size class	Manufacturer's gross vehicle weight class	Gasoline trucks	Diesel trucks
Class 1	6,000 lbs and less	17.2	18.8
Class 2	6,001–10,000 lbs	12.9	15.0
Class 3	10,001–14,000 lbs	9.3	9.5
Class 4	14,001–16,000 lbs	8.3	10.1
Class 5	16,001–19,500 lbs	7.6	10.0
Class 6	19,501–26,000 lbs	7.3	7.3
Class 7	26,001–33,000 lbs	6.1	6.7
Class 8	33,001 lbs and up	5.5	5.5
Total		15.4	6.5

Source:
U.S. Department of Commerce, Bureau of the Census, *1992 Truck Inventory and Use Survey*, Microdata File on CD, 1995. (Additional resources: http://www.census.gov/svsd/www/tiusview.html)

Table 7.8
Truck Statistics by Size, 1992

	Manufacturer's gross vehicle weight class			
	Light (< 10,000 lbs)	Medium (10,001–26,000 lbs)	Heavy (> 26,000 lbs)	Total
Trucks	54,587,379	685,679	3,927,697	59,200,755
Trucks (%)	92.21%	1.16%	6.63%	100%
Miles per truck	12,377	12,219	26,044	13,281
Total miles (%)	85.92%	1.07%	13.01%	100%
Fuel use (%)	70.32%	1.48%	28.20%	100%
Fuel economy (mpg)	15.70	9.24	5.93	12.85
	Range of operation			
Under 50 miles	75.84%	68.55%	56.47%	74.49%
50–100 miles	11.33%	14.40%	14.55%	11.57%
100–200 miles	3.31%	4.43%	6.53%	3.53%
200–500 miles	2.14%	1.68%	6.33%	2.41%
Over 500 miles	2.17%	1.36%	7.51%	2.51%
Off-road	5.21%	9.59%	8.61%	5.48%
Total	100%	100%	100%	100%
	Primary refueling facility			
Central company-owned	15.83%	23.56%	36.73%	32.06%
Single off-site contract	3.51%	4.34%	6.30%	5.65%
Pubic station	77.05%	66.72%	51.86%	57.37%
Other	3.61%	5.39%	5.10%	4.93%
Total	100%	100%	100%	100%

Source:
U.S. Department of Commerce, Bureau of the Census, *1992 Truck Inventory and Use Survey*, Microdata File on CD, 1995. (Additional resources: http://www.census.gov/svsd/www/tiusview.html)

Table 7.9
Percentage of Trucks by Major Use and Primary Refueling Facility, 1992

	Primary refueling facility				
Major Use	Central company-owned fueling facility	Single contract fueling facility located off-site	Public fueling stations	Other	Total
Agricultural services	32.66%	2.73%	51.68%	12.93%	100%
Forestry or Lumbering Activities	26.34%	6.43%	63.71%	3.52%	100%
Construction work	35.79%	4.93%	56.71%	2.57%	100%
Contractor Activities or special trades	16.62%	4.93%	77.01%	1.44%	100%
Manufacturing, refining or processing activities	37.54%	11.21%	49.05%	2.20%	100%
Wholesale trade	35.55%	12.72%	49.99%	1.74%	100%
Retail trade	31.35%	8.18%	58.67%	1.81%	100%
Business and Personal services	23.48%	5.94%	68.24%	2.34%	100%
Utilities	58.68%	2.31%	36.42%	2.58%	100%
Mining or quarryng activities	53.75%	5.82%	38.05%	2.38%	100%
Daily rental	49.95%	2.79%	44.75%	2.50%	100%
Not in use	14.42%	3.64%	46.70%	35.24%	100%
For-hire transportation	37.80%	5.22%	53.65%	3.33%	100%
One-way rental	5.28%	0.07%	93.05%	1.60%	100%
Personal transportation	1.51%	0.68%	93.14%	4.67%	100%
Total	32.06%	5.65%	57.37%	4.93%	100%

Source:
U.S. Department of Commerce, Bureau of the Census, *1992 Truck Inventory and Use Survey*, Microdata File on CD, 1995.
(Additional resources: http://www.census.gov/svsd/www/tiusview.html)

Table 7.10
Percentage of Trucks by Size Ranked by Major Use, 1992

Rank	Light (< 10,000 lbs)	Medium (10,001 – 26,000 lbs)	Heavy (> 26,000 lbs)
1	**Personal**	**Agriculture**	**For Hire**
	73.54%	21.12%	18.21%
2	**Construction**	**Construction**	**Construction**
	7.57%	20.59%	18.17%
3	**Services[a]**	**Services[a]**	**Agriculture**
	5.12%	12.32%	17.42%
4	**Agriculture**	**Retail**	**Wholesale**
	4.99%	9.05%	8.73%
5	**Retail**	**Utilities**	**Retail**
	2.94%	6.44%	7.22%
6	**Not in Use**	**Wholesale**	**Personal**
	1.50%	6.04%	6.56%
7	**Wholesale**	**For Hire**	**Services[a]**
	1.38%	5.90%	6.20%
8	**Manufacturing**	**Personal**	**Manufacturing**
	1.02%	5.86%	5.53%
9	**Utilities**	**Manufacturing**	**Not in Use**
	0.72%	3.51%	3.49%
10	**Daily Rental**	**Not in Use**	**Utilities**
	0.40%	3.43%	2.66%
11	**Forestry**	**Daily Rental**	**Forestry**
	0.31%	2.89%	2.16%
12	**Mining**	**Forestry**	**Daily Rental**
	0.27%	1.48%	1.70%
13	**For Hire**	**Mining**	**Mining**
	0.24%	1.00%	1.69%
14	**One-Way Rental**	**One-Way Rental**	**One-Way Rental**
	0.01%	0.36%	0.26%
15	**Other**	**Other**	**Other**
	0.00%	0.00%	0.00%

Source:
U.S. Department of Commerce, Bureau of the Census, *1992 Truck Inventory and Use Survey*, Micro data File on CD, 1995. (Additional resources: http://www.census.gov/svsd/www/tiusview.html)

[a] Business and personal services.

1993 Commodity Flow Survey

The Commodity Flow Survey (CFS) is designed to provide data on the flow of goods and materials by mode of transport. The CFS is a continuation of statistics collected in the Commodity Transportation Survey from 1963 through 1977, and includes major improvements in methodology, sample size, and scope. A sample of 200,000 domestic establishments randomly selected from a universe of about 900,000 establishments engaged in mining, manufacturing, wholesale, auxiliary establishments (warehouses) of multi-establishment companies, and some selected activities in retail and service was used. Each selected establishment reported a sample of approximately 30 outbound shipments for a two-week period in each of the four calendar quarters of 1993. This produced a total sample of about 20 million shipments. For each sampled shipment, zip codes of origin and destination, 5-digit Standard Transportation Commodity Classification (STCC) code, weight, value, and modes of transport, were provided. Establishments were also asked to indicate whether the shipment was containerized, a hazardous material, or an export.

The 1993 CFS differs from previous surveys in its greatly expanded coverage of intermodalism. Earlier surveys reported only the principal mode. The 1993 survey reports all modes used for the shipment (for-hire truck, private truck, rail, inland water, deep sea water, pipeline, air, parcel delivery or U.S. Postal Service, other mode, unknown). Route distance for each mode for each shipment as imputed from a mode-distance table developed by Oak Ridge National Laboratory. Distance, in turn, was used to compute ton-mileage by mode of transport.

For more information about the Commodity Flow Survey, contact the Commodity Flow Survey Branch, Department of Commerce, Bureau of the Census, Services Division at (301) 457-2108, or visit the following Internet site: **http://www.bts.gov/cfs/cfs.html**

Table 7.11
1993 Commodity Flow Survey: Shipment Characteristics by Mode of Transportation

Mode	Value (million dollars)	Tons (thousands)	Ton miles (millions)	Value (percent)	Tons (percent)	Ton miles (percent)	Value per ton (dollars)	Value per pound (dollars)	Ton miles per ton
CFS plus ORNL	$6,123,832	12,157,105	3,627,91	100.0%	100.0%	100.0%	$503.7	$0.25	298
Parcel, postal, courier service	$563,277	18,892	13,151	9.2%	0.2%	0.4%	$29,815.6	$14.91	696
Truck (for-hire, private, both)	$4,403,495	6,385,915	869,536	71.9%	52.5%	24.0%	$689.6	$0.34	136
Air (including truck and air)	$139,087	3,139	4,009	2.3%	0.0%	0.1%	$44,309.3	$22.15	1,277
Rail	$247,394	1,544,148	942,561	4.0%	12.7%	26.0%	$160.2	$0.08	610
Water	$64,077	518,912	271,981	1.0%	4.3%	7.5%	$123.5	$0.06	524
Pipeline	$89,849	483645	[a]	1.5%	4.0%	[a]	$185.8	$0.09	[a]
Truck and rail	$83,082	40,624	37,675	1.4%	0.3%	1.0%	$2,045.1	$1.02	927
Other intermodal	$13,382	148,883	185,030	0.2%	1.2%	5.1%	$89.9	$0.04	1,243
Other and unknown	$242,691	544,335	96,972	4.0%	4.5%	2.7%	$445.8	$0.22	178
ORNL estimates:									
Water (not in CFS)	$187,085	1,609,309	614,104	3.1%	13.2%	16.9%	$116.3	$0.06	382
Pipeline (not in CFS)	$90,413	859,303	592,900	1.5%	7.1%	16.3%	$105.2	$0.05	690
Intermodal[b] total	$659,741	208,399	235,856	10.8%	1.7%	6.5%	$3,165.8	$1.58	1,132

Source:
U.S. Department of Commerce, Bureau of the Census, *1993 Commodity Flow Survey: United States, TC92-CF-52*, and Oak Ridge National Laboratory estimates, Washington, DC, 1996, p. 3. (Additional resources: http://www.bts.gov/cfs/cfs.html)

[a]Data do not meet publication standards.
[b]Intermodal is a combination of parcel, postal or courier; truck and rail; truck and water, rail and water; and other intermodal. It excludes truck and air which is added to air transportation.

Table 7.12
Value, Tons, and Ton-Miles of Commodity Shipments, 1993

Commodity description[a]	Value (million dollars)	Tons (thousands)	Value per ton (dollars)	Ton-miles (millions)
Energy[b]				
Petroleum or coal products	$359,471	1,885,833	$191	287,081
Coal	$23,449	1,129,945	$21	487,791
Lumber and forest				
Pulp, paper, or allied products	$195,002	217,233	$898	100,721
Lumber or wood products, excluding furniture	$126,662	663,351	$191	120,669
Forest products	$1,700	30,520	$56	3,635
Mining				
Metallic ores	$20,278	149,562	$136	36,895
Nonmetallic minerals	$20,695	1,786,381	$12	155,417
Farm and food				
Food or kindred products	$856,884	859,764	$997	270,984
Farm products	$142,442	636,630	$224	276,260
Fresh fish or other marine products	$11,062	2,995	$3,693	1,746
Equipment, machinery, and instruments				
Transportation equipment	$652,474	87,617	$7,447	49,098
Machinery, excluding electrical	$442,770	34,180	$12,954	19,112
Electrical machinery, equipment, or supplies	$411,030	30,156	$13,630	19,591
Instruments, photographic goods, optical goods, watches, or clocks	$198,492	8,600	$23,080	5,390
Industrial products				
Chemicals or allied products	$532,907	545,405	$977	236,856
Fabricated metal products	$237,316	84,895	$2,795	30,489
Primary metal products	$228,610	266,409	$858	97,266
Rubber or miscellaneous plastics products	$175,267	52,349	$3,348	25,528
Clay, concrete, glass, or stone products	$91,365	799,481	$114	84,032
Consumer goods				
Apparel or other finished textile products	$291,203	15,128	$19,249	9,967
Textile mill products	$102,189	24,757	$4,128	11,341
Furniture or fixtures	$69,471	16,568	$4,193	9,789
Tobacco products, excluding insecticides	$60,640	3,225	$18,803	931
Leather or leather products	$50,645	2,401	$21,093	2,182
Waste materials[c]				
Waste or scrap materials	$18,258	130,894	$139	27,591
Waste hazardous materials or substances	$558	813	$686	314
Miscellaneous and other unknown				
Miscellaneous products of manufacturing	$200,803	20,731	$9,686	10,992
Miscellaneous freight shipments	$81,297	20,830	$3,903	5,038
Ordnance or accessories	$17,174	663	$25,903	629
Containers, carriers or devices, shipping, returned empty	$1,144	702	$1,630	230
Commodity unknown	$21,941	7,804	$2,812	2,522

Source:

U.S. Department of Commerce, Bureau of the Census, *1993 Commodity Flow Survey, United States, TC92-CF-52*, Washington, DC, 1996.

Note:

The sum of the data by commodity groups in this table is not equal to the total in previous table because it includes additional estimates of water and pipeline shipments by ORNL.

[a]Excludes data for printed matter because the data do not meet publication standards.

[b]Excludes data for pipeline shipments calculated by Oak Ridge National Laboratory (ORNL)that are included in previous table.

[c]Excludes data on municipal solid wastes.

Table 7.13
Summary Statistics on Buses by Type, 1970–96

Year	Transit motor bus[a]	Intercity bus	School bus
		Number in operation	
1970	49,700	22,000	288,700
1975	50,811	20,500	368,300
1980	59,411	21,400	418,255
1985	64,258	20,200	480,400
1990	58,714	20,680	508,261
1993	64,850	19,119	534,872
1994	68,123	19,146	547,718
1995	67,107	20,138	560,447
1996	67,874	20,649	569,395
		Vehicle-miles (millions)	
1970	1,409	1,209	2,100
1975	1,526	1,126	2,500
1980	1,677	1,162	2,900
1985	1,863	933	3,448
1990	2,123	991	3,800
1993	2,210	1,065	4,300
1994	2,162	1,211	4,400
1995	2,178	1,194	5,000
1996	2,165	1,220	5,000
		Passenger-miles (millions)	
1970	18,210	25,300	[b]
1975	18,300	25,400	[b]
1980	21,790	27,400	[b]
1985	21,161	23,800	[b]
1990	20,981	23,000	74,200
1993	20,247	24,700	94,200
1994	18,832	28,100	85,000
1995	18,818	27,700	95,000
1996	18,860	28,300	99,000
		Energy use (trillion Btu)	
1970	44.8	26.6	37.5
1975	51.5	24.8	42.6
1980	61.3	29.3	47.5
1985	72.4	31.5	57.0
1990	78.9	21.7	62.2
1993	86.2[c]	24.0	82.1
1994	86.7	24.7	90.6
1995	87.5	22.6	68.4[d]
1996	85.1	23.1[e]	68.4

Source:
See Appendix A for Table 7.13. (Additional resources: http://www.apta.com, http://www.fhwa.dot.gov, http://www.schoolbusfleet.com)

[a] Data for transit buses after 1983 are not comparable with prior data. Data for prior years were provided voluntarily and statistically expanded; in 1984 reporting became mandatory.

[b] Data are not available.

[c] Beginning in 1992, data became available on alternative fuel use by transit buses.

[d] Assumptions about fuel type changed in this year. See Appendix for details.

[e] Estimated using vehicle-miles.